MMS Today

Fall 2001

Alaska

This issue highlights the agency's role in the 49th State

Alaska — The Last Frontier

by Robin Cacy

A whale bone arch in Barrow

Alaska region file photo

No other state can boast the expanse of land or variation in people, geography and climate found in Alaska. It's size and diversity of environments and cultures is astounding. The area boasts 6,600 miles of coastline that includes the Arctic Ocean, the Bering Sea and the Northern Pacific ocean. That's more coastline than in the entire continental United States.

Along its shores, native villages, small fishing villages and large cities thrive. The ecosystems range from temperate rain forests to Arctic deserts.

In this environment, the MMS Alaska regional office must find a way to provide the opportunity to explore and develop offshore oil and gas prospects and still preserve the environment and the lifestyle of the people living adjacent to the coast.

First production

The agency's Alaska office is working with British Petroleum on two projects leading to the first federal offshore oil production in the region.

The Northstar Project straddles federal and sate leases in the Beaufort Sea. Drilling on state leases started in December 2000 and a disposal well and three development wells have been completed. The remaining production modules were installed late this summer with first production scheduled for November 2001.

Up to 20 percent of the Northstar reserves could be allocated to federal leases and would represent about $240 million in federal royalty.

These leases are also within the outer continental shelf designated 8(g) boundaries that entitle Alaska to receive 27 percent of federal revenues.

The MMS and other regulatory agencies are reviewing the Liberty Project proposal, located in Foggy Island Bay. Public comments on a draft environmental impact statement are being reviewed and will be incorporated into the final environmental impact statement. The final EIS should be available in early 2002.

Working with stakeholders and government

The MMS, along with other federal agencies in Alaska, developed a policy that outlines how and when to consult with Alaska's federally recognized tribes.

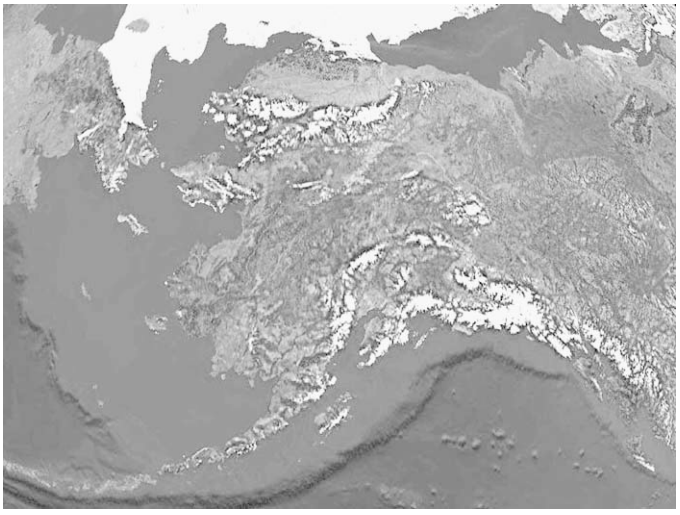
"The Alaska regional office is working to improve relations with our constituents and assure that the OCS program is adequately protecting the marine, coastal and human environment," said regional director John Goll.

"Our staff works closely with Native tribes and organizations, local and state government entities, other federal agencies, environmental and industry organizations and the public to assure that the various views and concerns are integrated into the OCS program, " he added.

Studies to protect the environment

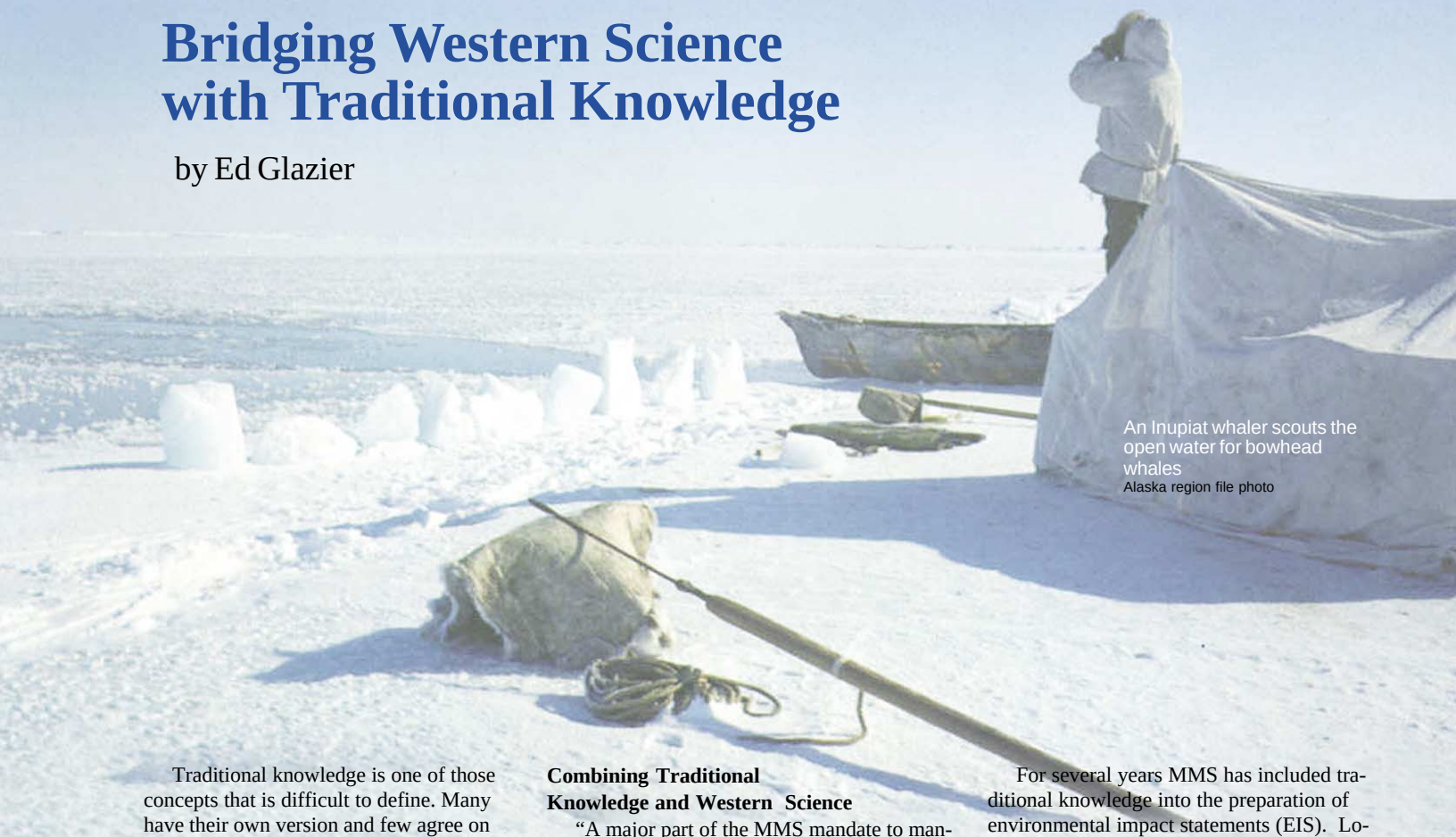
Environmental and socio-economic information is necessary to adequately review proposed OCS activities and make offshore leasing decisions. To that end, the Alaska regional office developed a Coastal Marine Institute with the University of Alaska Fairbanks' School of Fisheries and Ocean Sciences to study the marine environment. The agency conducts an ambitious studies program to assure that the exploration and development of OCS resources are carried out in a safe manner to not only provide needed energy for the nation, but to also protect the environment and preserve the lifestyle of Alaska's residents.

MMS provides $1 million per year that is matched dollar-for-dollar by other federal and state funds.



Bridging Western Science with Traditional Knowledge

by Ed Glazier



An Inupiat whaler scouts the open water for bowhead whales
Alaska region file photo

Traditional knowledge is one of those concepts that is difficult to define. Many have their own version and few agree on what it is or how to use it. Ask a resident of Anchorage, Alaska's largest city, and a resident of Nuiqsut, a small native village on the North Slope, and you'll get two different answers.

According to the native people of Alaska, traditional knowledge is practical, common sense information based on teachings and experience passed down by elders from generation to generation. Little of it is written down which is in direct opposition to Western science which is usually published and peer-reviewed.

Traditional knowledge involves an extensive and holistic understanding of the environment and the interrelationships of its various parts. These traditions provide a framework for determining how resources are used and shared.

Other ways of defining traditional knowledge include gathering knowledge from hundreds of years of understanding the landscape, and taking information about the natural world from generations of observations by native people who could be killed if they acted on wrong information. With this in mind, there is a strong tendency for traditional knowledge to lean toward the truth and practical strategies—what has worked and what hasn't.

Each of these points illustrates the difficulty of integrating traditional knowledge into scientific and decision making documents.

Combining Traditional Knowledge and Western Science

"A major part of the MMS mandate to manage and lease offshore oil and gas resources on the outer continental shelf requires the integration of many disciplines into decision documents like environmental impact statements," says Mike Burwell, sociocultural specialist. Descriptions of the environment and assessments of natural, biological and sociocultural resources in the area are vital to sound decision making by MMS managers. "We look at the potential impacts leasing and development activities in the Alaskan arctic may have on wildlife resources, and on endangered or threatened species like bowhead whales, arctic peregrine falcons, walrus and polar bears," he added.

Native subsistence harvest patterns and customs of the Inupiat are also assessed. "Traditional knowledge is valuable in understanding the individual topics and the concept of development in the Arctic as a whole," Burwell added.

For the role the agency plays in managing Alaska's energy development in federal waters, MMS consults regularly with Alaska state officials, the Alaska Eskimo Whaling Commission, the North Slope Borough, and other federal agencies, as well as various native governments, traditional councils and local citizens. MMS's move to incorporate traditional knowledge into decision documents is motivated by a government-wide movement to promote constructive relationships with tribes, and a growing concern of Alaska's North Slope native communities that MMS includes their knowledge in the process.

For several years MMS has included traditional knowledge into the preparation of environmental impact statements (EIS). Local officials and village elders helped MMS identify traditional knowledge sources, some of which included transcripts of North Slope Borough elders conferences and published interviews. Collectively, these provide a rich source of native testimony and observation. MMS also has more than 25 years of archived hearing transcripts and meeting notes from earlier lease sales that contained considerable native observations.

"Combining the two bodies of knowledge has produced a sharing of scientific and traditional information that has proven to be effective in our decision-making," said John Goll, director of the agency's Alaska regional office.

The method of incorporating traditional knowledge into the review process is simple—Native speakers are quoted in the text of the environmental impact statements and cited in the bibliography. This helps to remove earlier concerns from native critics, who claimed that although they were consulted, "what we say is not in the EIS." Their words are now put alongside the opinions of Western scientists with no attempt made to prove or justify one knowledge system over another. They are simply included together in the EIS.

*see **Traditional Knowledge**, page 11*

Solid Minerals Reporting Requirements Amended

To implement its reengineered royalty compliance strategy, MMS has amended its solid minerals reporting regulations.

"The new reporting requirements replace several information collections and decrease the reporting burden for solid mineral reporters," said Lucy Querques Denett, the agency's associate director for Minerals Revenue Management.

As a result of its initiative to reengineer royalty compliance operations and develop a process to assure that mineral revenues are properly paid, MMS set a performance goal to assure royalty compliance in the shortest time possible, but not more than 3 years from the due date of the payment.

"This goal," said Denett, "led MMS to adopt a contemporaneous compliance strategy designed to detect and resolve compliance issues in the early stages of the compliance cycle. It targets audits accordingly, rather than waiting for future regularly scheduled or random audits."

With industry participation, MMS determined the minimum amount of data necessary to support its contemporaneous compliance program.

"The new reporting requirements replace eight existing production and royalty forms with a single form (Form MMS-4430, Solid Minerals Production and Royalty Report) and three supplementary data collections (sales contracts, sales summaries and facility reports). The new process allows MMS to integrate production and royalty information into its compliance and asset management activities.

Arctic Natural Gas: A Bright Future

by Kirk Sherwood

Energy. It moves cars, heats homes and lights our world. Our need for fuel pushes us to explore for new sources of energy.

Total energy consumption in the United States is expected to increase by at least 26 percent in the next 15 years. In 1999, natural gas supplied 23 percent of the overall national energy mix. By 2015, natural gas usage will rise to 27 percent of our total consumption.

Natural gas is the fastest growing energy source because of increasing demand for electricity generated by clean and efficient gas-fired plants.

Figure one shows three projections for U.S. natural gas demand to the year 2015. Gas production is portrayed as declining after year 2000 because the graph assumes that there will be no future exploration for new gas fields after that time.

Depletion of producing gas fields quickly opens up a potential shortfall in the gas supply. Traditional gas-producing areas will be strained to meet the swelling future demand.

Most new discoveries in traditional gas-producing areas are small and are quickly depleted. Unlike U.S. crude oil supplies, more than 50 percent of which are shipped from overseas, ship-borne imports of natural gas cannot rise quickly enough to the quantities required to meet projected future demand. Natural gas in adequate quantities can only be delivered by pipe. Accordingly, the U.S. must look to North American frontiers—most prominently the Arctic and the deepwater Gulf of Mexico—for significant new supplies of natural gas.

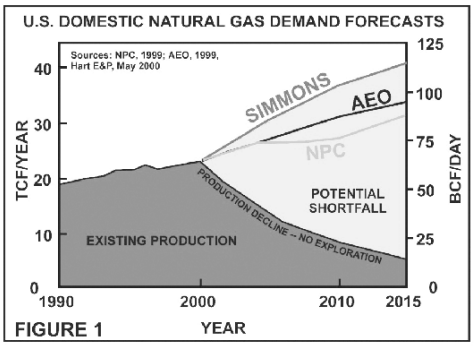


FIGURE 1

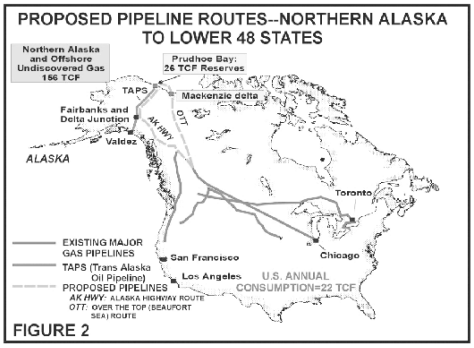


FIGURE 2

Oil exploration over the past 35 years in northern Alaska discovered more than 41 trillion cubic feet (tcf) of gas that is stranded by the lack of a means to trasport it to market. For comparison, the U.S. currently consumes 22 tcf of gas annually.

Approximately 26 tcf of natural gas reserves are located near the head of the Trans Alaska oil pipeline at Prudhoe Bay field (see Figure 2)

Several options are being studied to get gas from northern Alaska to the lower 48 states.

Alaska favors a pipeline that follows the existing highway system to northern Alberta or British Columbia. This "highway" route would provide opportunities for long-term economic growth to Alaska.

A second pipeline option is the "over the top" route, which would consist of a 300-mile buried pipeline on the Beaufort Sea continental shelf to connect Prudhoe Bay to the Canadian Mackenzie delta, then extending as an overland pipeline south along the Mackenzie River to northern Alberta. At its southern end in Canada, any new gas pipeline from Prudhoe Bay or the Mackenzie delta will transfer gas either to existing pipelines or to newly constructed pipelines connecting to major U.S. gas distribution centers.

There are two other proposals for marketing the northern Alaska gas reserves. One proposal is to build a new gas pipeline to Valdez, Alaska, where the gas would be converted to liquefied natural gas and shipped to the Asian Pacific Rim or western Mexico. Liquid natural gas shipped to Mexico would be re-gasified and piped north to the U.S. West Coast.

The second proposal is to convert the natural gas by on-site chemical transformations to petroleum liquids, possibly ultraclean diesel fuel, that are marketed to the U.S. through the existing Trans Alaska oil pipeline and oil tanker fleet.

The construction of any gas transportation system to the considerable natural gas assets at Prudhoe Bay will spark a boom in gas exploration, discovery and development in the Arctic regions of northwestern North America.

With an aggregate natural gas endowment approaching 200 TCF, northern Alaska seems destined to become a strategic supplier to the voracious and growing U.S. lower 48 natural gas market.

California Office Active in School Partnerships

by John Romero

Pacific Region file photo

Krista Bywater, a public affairs intern, identifies natural oil seepage along the coast of Carpinteria as part of an MMS-led geology tour for local students.

Partnerships come in many forms. While some are formal agreements with carefully-worded commitments, others are, in the purest form, the mere sharing of expertise.

Both forms of partnering are part of the pervasive culture found within the day-to-day activities of the MMS Pacific Region. In addition to producing valuable research for government policymakers, these partnerships have introduced California's students, teachers and general public to local geology, marine science and engineering.

Over the past decade, MMS scientists and support staff in California have worked closely with local schools, universities and a variety of educational organizations on successful education outreach efforts that spark interest and learning in the sciences while enhancing an understanding of the agency's mission.

With the dawn of the 21st century, the Pacific Region will draw on its existing partnerships and seek out others to explore new and innovative ways of sharing MMS science with the American public.

The following are highlights of some of the Pacific Region's partnerships:

Coastal Marine Institute

The Pacific Region contracts with the University of California for scientific research known as a Coastal Marine Institute agreement. A team composed of a university research director and MMS scientists and managers formulates the research agenda, which includes oceanographic studies nearshore and on the OCS and socioeconomic impacts from oil and gas and other mineral extraction activities. Through the CMI, MMS and the state reach consensus on key offshore oil and gas and marine mineral research issued.

Hispanic Association of Colleges and Universities (HACU)

Cooperative Agreement with Oxnard College: The Pacific Region and Oxnard College work under an agreement involving various programs including internships, work-for-school-credit assignments, and the development of advertising and other media. Students selected though the Oxnard College Disability Employment Program have been hired through the DOI Student Continual Education Program internships.

Partnership Schools

Since 1999, the Pacific Region and Bedford Open School, a local public elementary school, have been operating within an agreement where MMS provides classroom presentations on geology, biology, oil and gas and professional careers. The agency also provides field trip assistance, information support for educators and other services.

The MMS investment varies from year to year but generally involves one field trip per year to discuss and view area geology, biology and natural oil seeps. This year, MMS may add a partnership with a predominantly Hispanic elementary school in nearby Oxnard, hopefully working with both schools simultaneously.

Los Marineros Program

For three years, the MMS has participated in the Los Marinos Program in the Santa Barbara School District, giving a 50-minute program on maritime history to each 5th grade class at 10 Santa Barbara schools.

The presentations discuss the aboriginal, historic and contemporary maritime uses of the California coast, keyed to the state's social science curriculum standards.

Students learn about the history, culture and geography of the Santa Barbara Channel. The multi-media presentation starts with how the native peoples of the area constructed ocean-going canoes; continues with Spanish explorer Juan Cabrillo's 16th century voyage of discovery; and culminates with stories of the ill-fated voyages of Spanish
treasure galleons and California Gold Rush-era paddlewheel steamers.

The presentations are part of the Los Marineros marine education program of the Santa Barbara Museum of Natural History and the Santa Barbara School District.

National Energy Education Development (NEED) Project.

NEED programs teach students and teachers to consider energy issues objectively – looking at all of the advantages and disadvantages to energy production and use. Through these programs students are taught to develop opinions and attitudes based in smart science and in realistic terms.

These programs help students and teachers think critically about each of the energy choices they make each day.

In Alaska , as well as in California and the Gulf of Mexico, the Minerals Management Service is committed to safe offshore operations in federal waters while ensuring that marine and coastal environments are protected.

Alaska is a land of quiet majesty. More than twice the size of Texas, it is the country's larges
600,000 square miles is a nature photograpaher's dream of fjords, glaciers and some of the l

Southeast Alaska is a land of spruce forests, quiet bays and islands teeming with wildlife ar

Northern Alaska sprawls across the top of Alaska north of the Arctic Circle. It's the true la
whales from small boats and share the harvest with their communities. Gwich'in Indians wa
bou will calve their young and spend the summer along the cold sea with millions of nesting

But the north is also a throbbing outpost of industrial life. The North Slope oil fields pump o
across the Brooks Range toward Valdez. The Red Dog mine near Kotzebue is one of the wo
way to provide the opportunity to explore and develop offshore oil and gas prospects and st

st state. It’s natural diversity is nothing short of stunning. The state’s landscape on nearly
highest mountain peaks in the country.

nd natural beauty.

and of the midnight sun — and the noon darkness. Inupiat Eskimo crews still hunt bowhead
it for the annual return of the Porcupine River caribou. Migrating to the coastal plain, the cari-
waterfowl.

out a fifth of the nation’s daily production of crude oil and push it into a pipeline headed south
orld’s largest zinc producers. In this environment, the MMS Alaska regional office must find a
ill preserve the environment and the lifestyle of the people living adjacent to the coast.

Agency Active in Study of Bowhead Whales

Relationship with offshore oil and gas development key

Alaska region staff report

One sign that fall has arrived in the Arctic is the migration of the bowhead whale. The large mammals move from its primary summer feeding areas in the Canadian Beaufort Sea to the Chukchi and Bering Seas where they spend the winter.

The bowhead whale gets its name from its distinctive bow-shaped skull. It is the only large whale living exclusively in the Arctic. Reaching lengths of up to 60 feet, and weighing in at 80 tons, the large marine mammal plays a major part in the life and culture of the Inupiat people of northern Alaska. The whale is an important subsistence food for the Alaskan coastal villages along their migration route, and thus is protected by U.S. law.

Due to concerns about the potential effects of offshore oil and gas development on the whale's habits and ecosystem, the bowhead whale is a subject in several ongoing or proposed studies.

The MMS studies program in Alaska conducts research on topics like bowhead feeding areas, migration patterns, tissue archiving, traditional knowledge and subsistence. Additional studies include the effects of seismic exploration and other oil-industry noise on the bowhead.

MMS also studies other whales that frequent Alaskan waters to provide baseline data about their behavior, life cycles, feeding habits, noise impact, distribution and migration patterns. This information provides a basis for a comparison between late 1970s and current data to determine the effects of offshore oil and gas exploration and development on the whales.

A tagged bowhead whale in Alaska's Beaufort Sea

Alasks region file photo

The Fall Bowhead Whale Aerial Survey

Since 1987, MMS has conducted an annual survey of migrating bowhead whales. Each fall, the Bowhead Whale Aerial Survey Project (BWASP) takes to the air to provide MMS and the National Marine Fisheries Service daily reports on the fall migration.

"Information on the number of whales sighted, their behavior and their locations relative to shore and human activity is helping a committee of scientists better understand how the bowhead reacts to obstacles and industry noise," says Steve Treacy, project research manager.

"Bowhead whales are the only animals we monitor, though they are the key subject of the survey. We also monitor gray and beluga whales and note the location and number of other species including polar bears, and bearded and ringed seals," he added.

Reports on these surveys have been compiled and provide a snapshot of bowhead whale migrations in relationship to periods of offshore exploration and development, and periods of no offshore activity.

Related Studies

MMS has sponsored a variety of studies on the effects of noise on the bowhead whale. These studies cover topics ranging from their behavior and distribution in the eastern Beaufort Sea to estimating the acoustic effects of oil production activities on bowhead and white whales during their spring migration.

In 1993, MMS and the Society for Marine Mammalogy published a report titled *The Bowhead Whale* which summarized the existing information on bowheads and noise. It included a broad range of scientific information on their evolution, behavior, anatomy, reproduction, population dynamics and distribution.

MMS is working closely with subsistence whaling captains and other management agencies to compile the latest data on noise issues.

In 1997, MMS held a workshop in Barrow, Alaska on Arctic seismic synthesis.

Ongoing or proposed bowhead studies in the MMS Alaska annual studies plan also address noise issues.

One proposed study would assess individual whale's response to seismic vessels. The goal is to confirm the sound levels heard by the whales and measure the distances at which individual bowheads respond to seismic and other industry noise. In addition, scientists will collect physiological data from the whales. Other information to be collected includes where and how long migrating whales stop to feed; how individuals respond to multiple sounds; whether some whales migrate farther north than reported; and where migrating whales go after passing Point Barrow, Alaska. The study will begin in early 2003 if it is fully funded.

During the last 25 years, community leaders and many other people have expressed concern about the potential

continued next page

Bowhead Whale Studies Continue

from previous page

effects of offshore oil and gas development not only on wildlife but also the social changes that may come with development. Consequently, the Alaska environmental studies program has emphasized sociocultural and economic studies of coastal communities.

"The residents of Nuiqsut, Kaktovik and Barrow, for example, are close to oil-industry activity onshore and offshore. Subsistence is a central part of their culture," said Cleve Cowles, chief of the Alaska environmental studies program. " Most Inupiat living in those villages rely on subsistence resources directly or indirectly, and bowhead whale hunting is especially important."

Alasks region file photo

A bowead whale along its migration route through the Beaufort Sea

Mitigation and Industry Monitoring

When MMS offers offshore areas of the Beaufort Sea for lease, it requires oil companies to limit the potential effects of noise through stipulations attached to the lease. One stipulation for a recent lease sale is a requirement that industry conduct site-specific bowhead whale monitoring to measure any behavioral effects from industry noise on the whales. Another stipulation requires oil companies to consult with communities that could be affected by industry activity and with the Alaska Eskimo Whaling Commission to reduce or eliminate any unreasonable conflicts with subsistence whalers.

The offshore oil-and-gas industry is required, under the Marine Mammal Protection Act and Endangered Species Act, to monitor potential site-specific noise impacts. Thus, most industry exploration is accompanied by studies which are reviewed and approved by the National Marine Fisheries Service.

MMS provides its bowhead monitoring data to the required industry studies which are then used by government and industry to interpret whale observations near industry activities.

In summary, in order to obtain the scientific information needed to help make environmentally sound decisions about offshore oil and gas development in Alaska, MMS continues to study the bowhead, its environment and its importance to the well being of communities along the north coast of Alaska.

The Alaska Region Studies Plan: Eiders, Sea Ice, Polar Bears and more

The Alaska Region released its final Annual Studies Plan for Fiscal Years 2002-2003. The Plan describes 44 approved studies and 25 proposed studies funded by MMS. The studies encompass physical oceanography, fate and effects, biology, protected species, social science and economics.

"Our studies give us a picture of the existing environment so we can predict what effects exploration and development might have and to develop measures to protect the environment," said Cleve Cowles, chief of the Alaska studies program. "Most of the studies described in this plan focus on the central Beaufort Sea. These studies will be used to assess potential effects of the proposed Liberty project located near Prudhoe Bay as well as adding to the information base for the area," Cowles added.

The six studies approved for 2001 include:

- an evaluation of the distribution and movements of Spectacled Eiders in the Beaufort Sea;
- an analysis of the effects of human activities and sea ice in relation to the fall migrations of bowhead whales;
- a workshop to develop a model to predict recovery rates for bird populations;
- determine how polar bears use sea ice as habitat in the southern Beaufort Sea;
- a report which includes observations of government and industry scientists and subsistence whale hunters in one volume; and
- an estimate of the social and cultural impacts of OCS oil and gas exploration on Beaufort Sea communities.

Other proposed studies range from updating climate atlases to studying the distribution of kelp in western Camden Bay. The studies plan is available on the MMS Alaska website at **www.mms.gov/alaska** under the Environmental Studies Section.

Agency Hands-On in the Community

Community service is an Integral part of the region's mission

Alaska region staff report

Alasks region file photo

Paul Stang clears debris from Chester Creek during a clean-up effort.

Each year, MMS volunteers brave Alaska's quirky May weather to take part in a hands-on environmental education program known as Outdoor Week. Designed for sixth graders, the annual event is held rain or shine the week before school ends and gives the kids a chance to stretch their legs, enjoy the outdoors and receive hands-on experience in such diverse topics as basic geology, gold panning, biology and wildlife management.

"We've been doing Outdoor Week for the last 22 years," says Paul Lowry, a coordinator for the event. "Members of our staff guide students through the mysteries of geology. Using rock samples from all over the world, and props like peach halves and a baking soda volcano, students learn to recognize different types of rocks and their origins; plate tectonics and volcanoes, geologic time, water aquifers and the geology of the Anchorage Bowl."

Community service is an important outreach effort of the Alaska regional office. Being good neighbors just seems to come naturally to the staff, whether to help local schools or clean up the town after a long winter.

Outdoor Week is just one example of the agency's commitment to work with the community. The DOI-wide project draws on participants from all disciplines in the Alaska Region.

Alasks region file photo

Paul Lowry explains Alaska geology to 6th grade students during Outdoor Week.

Cleaning Up in the Spring

Many folks in the lower-48 celebrate Earth Day by cleaning up trash and debris around their city. In Alaska its still winter in April, so clean up is delayed until May. To celebrate the coming of spring, Alaska regional staff takes part in the Anchorage-wide annual Creek Cleanup. An interoffice team wades into the water to clean up the trash and debris that accumulates during the fall and winter.

According to Caryn Smith, an oceanographer with the region, this year's crew worked extra hard. "We pulled more than 70 bags of trash and other debris from South Fork of Chester Creek, a small creek that runs through Anchorage," Smith said.

Promoting Science in the Schools

The regional office is also a partner with Campbell Elementary in Anchorage. The staff, along with the school's PTA, sponsors an annual science fair.

"Students turn in some impressive projects," says Robin Cacy, the region's public affairs officer. "I am always impressed with the quality of the projects, especially from the younger students."

This year more than 100 displays were presented to MMS judges for the science fair held in March. Projects ranged from testing burglar alarms to comparing which disposable diaper is most absorbent. Winners were selected from each grade level and several special awards were presented for outstanding display, best report, best group project, best family project, best energy-related project and best of show.

Other Outreach Efforts

The Alaska staff is involved in a myriad of charitable organizations donating hundreds of hours annually to groups such as the Boy Scouts, Girl Scouts, Campfire, soccer leagues, various PTA's and church organizations.

Several staff this year gave their time to the Special Olympics World Winter Games, which were held in Anchorage.

All of these activities keep the regional office actively in touch with the community.

Traditional Knowledge

from page 3

Using traditional knowledge in decision documents has produced a unique and valuable dialogue between the agency and the people of the North Slope. For example, an unprecedented set of measures that provided greater protection of subsistence whaling activities to the native people was born out of these negotiations.

Studies Expand the Knowledge Base

Gathering traditional knowledge has now become a primary objective of the agency's studies program. There are three ongoing studies to collect and catalog traditional knowledge for use by both federal and state agencies and others conducting arctic research.

One study, centered in Kaktovik, looks at bowhead whale feeding in the Eastern Beaufort Sea. This is the first MMS designed study to involve Kaktovik whalers.

Another involves the collection of traditional knowledge of the Alaskan North Slope conducted by the Ukpiagvik Inupiat Corporation in Barrow. The objective of the study is to identify both published and unpublished sources of traditional knowledge and then index and archive the material.

Communication is the Key

In order for conservation and development projects to successfully integrate traditional knowledge, agencies must strive for better communication and consultation, and learn how to form cooperative and collaborative partnerships with native communities.

This means that for MMS to be successful in identifying issues tied to oil and gas exploration and development in the Arctic, traditional knowledge must continue to be included in the analyses of projects and in the decision making process.

Alaska's Arctic is a complex ecosystem that has the potential to fill some of the nation's petroleum needs. Traditional knowledge will help MMS understand this ecosystem and involve the residents of the Arctic not only in their future but also in the energy future of this nation.

(Above) Inupiat whalers during their spring bowhead whale hunt. North Slope residents use small boats like the one pictured to hunt the whales.
(Left) Salmon drying on wooden racks. During the cold winters, villagers rely on dried salmon for food for themselves and for their dogs.

Alaska region file photos

OIL SPILL RESEARCH IN ALASKA

MMS Alaska file photo

Rope Mop Skimmer Deployment in broken ice

Although large oil spills from offshore oil platforms are rare events, such spills are possible when a drilling, production or pipeline accident occur.

Operators are subject to stringent requirements for prevention of spills and must demonstrate a 5,000 barrel-per-day response capability and be prepared for even larger spills.

Industry has acquired and stockpiled a vast amount of spill-response equipment for use in Alaska. Some of the equipment is stored at the drilling location to provide for an immediate response to a spill. Additional equipment is available from spill-response cooperatives if needed in the event of a very large spill.

The equipment includes everything from large offshore skimming systems and vessels to bird rehabilitation kits.

MMS periodically inspects the spill response equipment to ensure that it is available, well maintained and appropriate for the area of operations.

MMS also requires that operators field test the equipment and conduct response drills to ensure that personnel have been trained in the proper use of the equipment.

Also, burning spilled oil where it is collected, known to the industry as "in-situ" burning, is recognized as a valuable response tool for use offshore in Alaska. "In-situ" burning can be very effective in open water with the use of fire-resistant booms and in broken-ice without the use of booms.

Recent offshore burn tests have shown that the smoke plume from "in-situ" burning would not pose a health threat to onshore communities.

But prevention of spills is still the best means to protect the environment. MMS's regulatory program includes very stringent prevention measures.

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